

Amendment and Response

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Serial No.: 10/729,221

Confirmation No.: 9546

Filed: 5 December 2003

For: DENTAL MATERIAL STORAGE & DELIVERY SYSTEM & METHOD

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. **(Currently Amended)** A method of forming a dental material storage container and dispenser, comprising:

molding an elongated handle, the handle formed to have a length, a proximal closed end, a distal open end, and a bore extending therein from the distal open end, with the bore having a tip retention section adjacent a proximal end thereof, and the handle having an annular weakened wall line along or distally from the tip retention section thereof;

molding a dental material applicator tip, the tip having a proximal mounting segment, a median bending segment and a distal applicator segment, the proximal segment having a plurality of projections radially projecting therefrom and being formed to be received within the tip retention section of the bore of the handle;

inserting the proximal segment of the applicator tip into the tip retention section of the bore through the distal open end, wherein the projections on the tip frictionally engage the bore to nonremoveably fixedly connect the tip to the handle, and wherein the median bending segment of the tip is aligned with or distally from the radially extending weakened wall line of the handle;

introducing a desired amount of dental material into the bore through the distal open end after inserting the proximal segment of the applicator tip into the tip retention section of the bore;

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aligning a cap over the distal open end of the handle; and
sealing the cap to the handle to retain the dental material in the bore.

2. **(Original)** The method of claim 1, and further comprising:
forming the cap to include a longitudinal extension thereon which extends proximally from the distal open end of the handle into the bore.
3. **(Original)** The method of claim 2, and further comprising:
adjusting an available volume in the bore for dental material by changing the size of the extension on the cap.
4. **(Original)** The method of claim 1, and further comprising:
forming outward radial extensions on one or both of the cap and handle adjacent the distal open end thereof.
5. **(Original)** The method of claim 1, wherein the handle has a distal portion which extends a sufficient extent distally from the weakened wall line to facilitate gripping thereof for bending the distal portion relative to a proximal portion of the handle.
6. **(Original)** The method of claim 1, wherein the sealing step includes ultrasonic sealing.
7. **(Original)** The method of claim 1 wherein the handle is formed from a cyclic olefin copolymer.
8. **(Original)** The method of claim 7 wherein the cap is formed from a cyclic olefin

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copolymer.

9. **(Original)** The method of claim 1 wherein the applicator is formed from a polyolefin.
10. **(Original)** The method of claim 9 wherein the applicator is formed from a polyethylene.
11. **(Currently Amended)** A dental material delivery system comprising:
 - an applicator having a proximal segment, a median bending segment and a distal tip segment;
 - an elongated handle having a proximal end and a distal end, the handle having a generally cylindrical bore extending proximally therein from the distal end within a surrounding wall of the handle, the bore having a proximal section with a proximal closed end and a distal section with a distal open end, and the wall having an annular weakened wall line disposed generally between the proximal and distal sections of the bore, wherein:
 - the proximal segment of the applicator is nonremoveably frictionally mounted within the proximal section of the bore proximate the proximal closed end,
 - the median bending segment of the applicator is aligned generally longitudinally with the annular weakened wall line, and
 - the distal tip segment of the applicator extends into the distal section of the bore towards the distal open end;
 - a desired amount of dental material disposed within the distal section of the bore;
 - a cap mounted to the handle adjacent the distal end thereof to seal off the distal open end of the distal section of the bore; and

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wherein the wall of the handle is separable at the annular weakened wall line to permit withdrawal of the distal tip segment of the applicator from the distal section of the bore and transfer of dental material borne by the distal tip segment from the bore to a patient's dental anatomy.

12. **(Original)** The dental material delivery system of claim 11 wherein the proximal segment of the applicator has a plurality of radial projections thereon sized for interference fit with an inner diameter of the proximal section of the bore.
13. **(Original)** The dental material delivery system of claim 12 wherein each radial projection is a ring.
14. **(Original)** The dental material delivery system of claim 12 wherein each radial projection is an annular directional ribbing.
15. **(Original)** The dental material delivery system of claim 11 wherein the applicator is mounted in the bore whereby the flow of dental material proximally past the applicator into the proximal section of the bore is prevented.
16. **(Original)** The dental material delivery system of claim 11 wherein the handle is formed from a cyclic olefin copolymer.
17. **(Original)** The dental material delivery system of claim 16 wherein the cap is formed from a cyclic olefin copolymer.

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18. **(Original)** The dental material delivery system of claim 11 wherein the applicator is formed from a polyolefin.
19. **(Original)** The dental material delivery system of claim 18 wherein the applicator is formed from a polyethylene.
20. **(Original)** The dental material delivery system of claim 11 wherein the elongated handle has a generally cylindrical shape, with at least two different outer diameter portions, a first distal portion extending distally from adjacent the bore proximal end having a first outer diameter, and a second proximal portion having a second outer diameter smaller than the first outer diameter.
21. **(Original)** The dental material delivery system of claim 11 wherein, adjacent its distal end, the handle has a radial extension thereon.
22. **(Original)** The dental material delivery system of claim 11 wherein the cap has a radial extension thereon.
23. **(Original)** The dental material delivery system of claim 11 wherein the cap has a longitudinal extension which extends proximally from the distal end of the handle, into the distal section of the bore.
24. **(Original)** The dental material delivery system of claim 23 wherein an available volume of the distal section of the bore for dental material is a function of the longitudinal extent of the longitudinal extension on the cap.

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25. (Original) The dental material delivery system of claim 24 wherein the available volume is from about 100 microliters to about 500 microliters.